

Well Name: **Dechant X08-24D**

Surface Location: Dechant X08-24D Pad Sec.8-T2N-R65W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

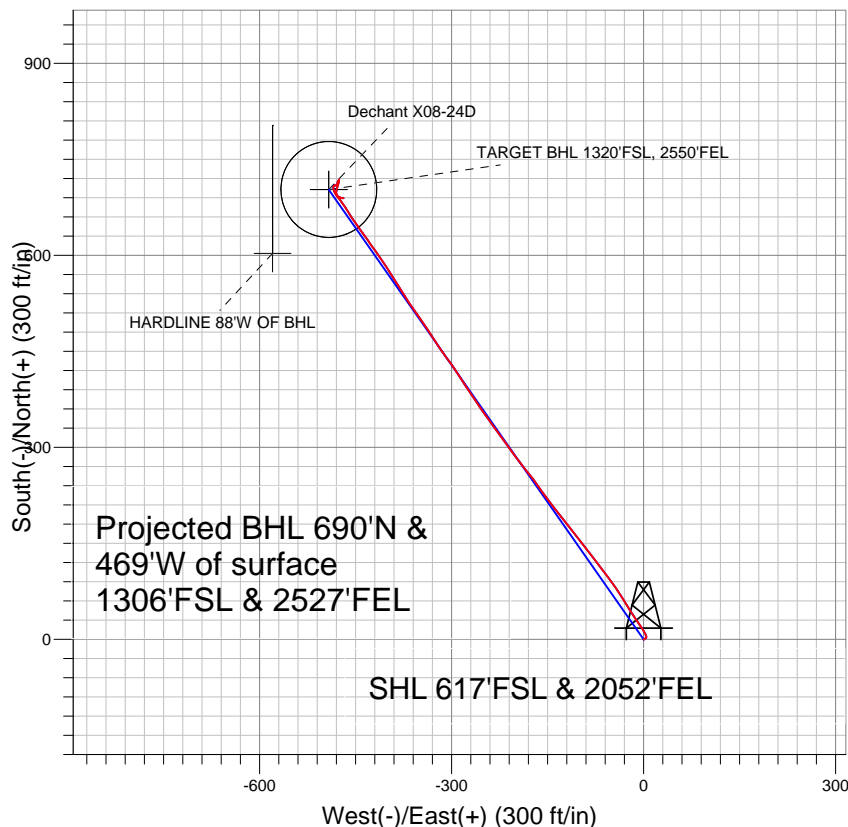
Ground Elevation: 4913.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1297677.46	3227629.16	40° 8' 51.540 N	104° 41' 8.556 W

Original Well Elev WELL @ 4926.0ft (Original Well Elev)

Slot

NOBLE ENERGY INC WELD COUNTY CO



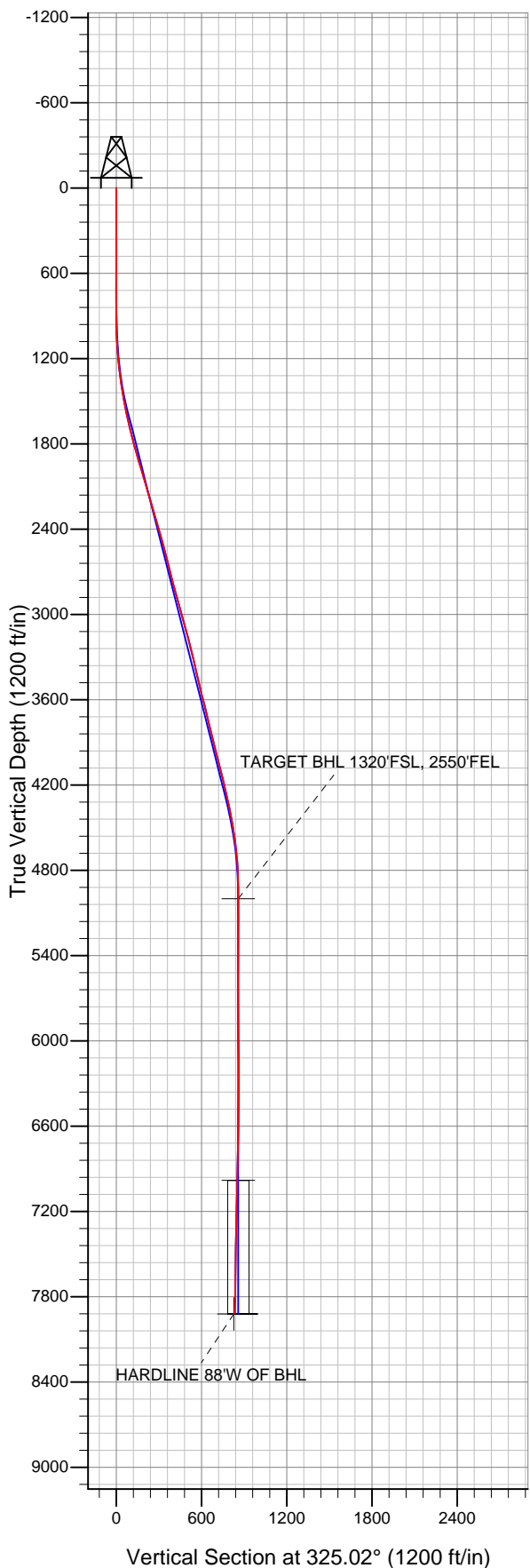
LEGEND

- △ Dechant X08-24D, Wellbore #1, Noble Dechant X08-24D Plan #1 (7-30-10) VO
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
8020'MD & 7916'TVD @ 834'VS
1.1 deg Inc 99.8 deg AZ

Project: SEC.8-T2N-R65W
Site: Dechant X08-24D Pad Sec.8-T2N-R65W
Well: Dechant X08-24D
Plan: Wellbore #1





Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.8-T2N-R65W

Dechant X08-24D Pad Sec.8-T2N-R65W

Dechant X08-24D

Wellbore #1

Survey: Survey #1

Standard Survey Report

13 July, 2011



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Site Dechant X08-24D Pad Sec.8-T2N-R65W
Project:	SEC.8-T2N-R65W	TVD Reference:	WELL @ 4926.0ft (Original Well Elev)
Site:	Dechant X08-24D Pad Sec.8-T2N-R65W	MD Reference:	WELL @ 4926.0ft (Original Well Elev)
Well:	Dechant X08-24D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.8-T2N-R65W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Dechant X08-24D Pad Sec.8-T2N-R65W		
Site Position:		Northing:	1,297,677.47 ft
From:	Lat/Long	Easting:	3,227,629.16 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 8' 51.540 N
		Longitude:	104° 41' 8.556 W
		Grid Convergence:	0.53 °

Well	Dechant X08-24D		
Well Position	+N/-S	0.0 ft	Northing: 1,297,677.46 ft
	+E/-W	0.0 ft	Easting: 3,227,629.16 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 8' 51.540 N
		Longitude:	104° 41' 8.556 W
		Ground Level:	4,913.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/3/2010	8.92	66.89	53,098

Design	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	5,000.0	0.0	0.0	325.02

Survey Program	Date	7/13/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
862.0	8,020.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
862.0	0.60	56.10	862.0	2.5	3.7	-0.1	0.07	0.07	0.00	
944.0	1.00	5.50	944.0	3.5	4.2	0.5	0.94	0.49	-61.71	
1,026.0	2.00	344.40	1,025.9	5.6	3.9	2.3	1.37	1.22	-25.73	
1,107.0	3.30	331.80	1,106.9	9.0	2.4	6.0	1.75	1.60	-15.56	
1,189.0	5.20	327.90	1,188.6	14.2	-0.7	12.0	2.34	2.32	-4.76	
1,271.0	6.50	326.40	1,270.2	21.2	-5.3	20.4	1.60	1.59	-1.83	
1,353.0	7.80	325.90	1,351.6	29.7	-10.9	30.6	1.59	1.59	-0.61	
1,434.0	9.40	326.20	1,431.7	39.7	-17.7	42.7	1.98	1.98	0.37	
1,516.0	10.20	328.20	1,512.5	51.5	-25.3	56.7	1.06	0.98	2.44	
1,598.0	12.40	328.80	1,592.9	65.2	-33.6	72.7	2.69	2.68	0.73	
1,679.0	13.60	325.00	1,671.8	80.4	-43.6	90.9	1.82	1.48	-4.69	
1,761.0	14.60	322.90	1,751.3	96.6	-55.4	110.9	1.37	1.22	-2.56	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Site Dechant X08-24D Pad Sec.8-T2N-R65W
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Site:	Dechant X08-24D Pad Sec.8-T2N-R65W	MD Reference:	WELL @ 4926.0ft (Original Well Elev)
Well:	Dechant X08-24D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,843.0	15.10	323.30	1,830.6	113.4	-68.0	131.9	0.62	0.61	0.49
1,924.0	16.30	322.50	1,908.5	130.8	-81.2	153.8	1.51	1.48	-0.99
2,006.0	16.90	321.70	1,987.1	149.3	-95.6	177.2	0.78	0.73	-0.98
2,088.0	16.40	321.70	2,065.7	167.8	-110.2	200.6	0.61	-0.61	0.00
2,169.0	16.50	322.10	2,143.4	185.8	-124.3	223.5	0.19	0.12	0.49
2,251.0	16.20	321.80	2,222.1	204.0	-138.6	246.6	0.38	-0.37	-0.37
2,333.0	16.00	323.70	2,300.8	222.1	-152.3	269.3	0.69	-0.24	2.32
2,414.0	16.40	324.40	2,378.6	240.4	-165.6	291.9	0.55	0.49	0.86
2,496.0	15.50	322.30	2,457.5	258.5	-179.0	314.4	1.30	-1.10	-2.56
2,578.0	15.20	321.30	2,536.5	275.5	-192.4	336.1	0.49	-0.37	-1.22
2,659.0	14.00	323.90	2,614.9	291.7	-204.9	356.5	1.69	-1.48	3.21
2,741.0	14.10	324.60	2,694.5	307.9	-216.5	376.4	0.24	0.12	0.85
2,823.0	14.40	323.10	2,774.0	324.2	-228.4	396.6	0.58	0.37	-1.83
2,904.0	15.70	324.90	2,852.2	341.2	-240.7	417.6	1.71	1.60	2.22
2,986.0	15.90	325.50	2,931.1	359.5	-253.5	439.9	0.31	0.24	0.73
3,068.0	15.90	325.20	3,009.9	378.0	-266.3	462.4	0.10	0.00	-0.37
3,149.0	15.50	327.90	3,087.9	396.3	-278.3	484.3	1.03	-0.49	3.33
3,231.0	14.60	326.60	3,167.1	414.2	-289.9	505.6	1.17	-1.10	-1.59
3,313.0	13.80	324.80	3,246.6	430.8	-301.2	525.7	1.11	-0.98	-2.20
3,395.0	13.20	323.50	3,326.3	446.3	-312.4	544.8	0.82	-0.73	-1.59
3,476.0	12.80	326.90	3,405.3	461.3	-322.8	563.0	1.07	-0.49	4.20
3,558.0	13.50	327.40	3,485.1	477.0	-332.9	581.7	0.86	0.85	0.61
3,640.0	14.40	325.80	3,564.7	493.5	-343.8	601.4	1.19	1.10	-1.95
3,721.0	13.50	323.40	3,643.3	509.4	-355.1	620.9	1.32	-1.11	-2.96
3,803.0	13.60	326.20	3,723.0	525.1	-366.2	640.1	0.81	0.12	3.41
3,885.0	13.70	329.50	3,802.7	541.5	-376.5	659.5	0.96	0.12	4.02
3,966.0	13.60	328.00	3,881.4	557.8	-386.4	678.5	0.45	-0.12	-1.85
4,048.0	14.20	327.10	3,961.0	574.4	-396.9	698.2	0.78	0.73	-1.10
4,130.0	14.80	325.00	4,040.4	591.4	-408.4	718.7	0.97	0.73	-2.56
4,211.0	14.70	324.40	4,118.7	608.3	-420.3	739.4	0.23	-0.12	-0.74
4,293.0	13.50	325.90	4,198.3	624.7	-431.8	759.3	1.53	-1.46	1.83
4,375.0	12.70	323.40	4,278.1	639.8	-442.5	777.9	1.20	-0.98	-3.05
4,456.0	11.70	325.10	4,357.3	653.7	-452.5	795.0	1.31	-1.23	2.10
4,538.0	10.30	328.10	4,437.8	666.7	-461.1	810.7	1.84	-1.71	3.66
4,620.0	8.50	326.80	4,518.7	678.0	-468.3	824.1	2.21	-2.20	-1.59
4,701.0	7.10	322.30	4,598.9	687.0	-474.7	835.0	1.88	-1.73	-5.56
4,783.0	5.90	324.10	4,680.4	694.4	-480.2	844.3	1.48	-1.46	2.20
4,865.0	4.00	338.90	4,762.1	700.5	-483.7	851.3	2.77	-2.32	18.05
4,946.0	2.60	354.90	4,843.0	705.0	-484.9	855.6	2.05	-1.73	19.75
5,028.0	1.40	23.00	4,924.9	707.8	-484.7	857.8	1.85	-1.46	34.27
5,102.9	1.12	38.10	4,999.8	709.2	-483.9	858.5	0.58	-0.37	20.16
TARGET BHL 1320'FSL, 2550'FEL									
5,110.0	1.10	39.90	5,006.9	709.3	-483.8	858.5	0.58	-0.30	25.36
5,191.0	0.50	105.60	5,087.9	709.8	-483.0	858.4	1.24	-0.74	81.11
5,273.0	0.40	112.70	5,169.9	709.6	-482.4	857.9	0.14	-0.12	8.66
5,355.0	0.40	98.30	5,251.9	709.4	-481.8	857.5	0.12	0.00	-17.56
5,437.0	0.40	78.10	5,333.9	709.4	-481.2	857.2	0.17	0.00	-24.63
5,600.0	0.50	51.00	5,496.9	710.0	-480.1	857.0	0.14	0.06	-16.63
5,763.0	0.40	37.80	5,659.9	710.9	-479.2	857.2	0.09	-0.06	-8.10
5,927.0	0.60	355.30	5,823.9	712.2	-478.9	858.1	0.25	0.12	-25.91
6,090.0	1.00	30.40	5,986.9	714.3	-478.3	859.5	0.38	0.25	21.53
6,253.0	1.40	20.40	6,149.8	717.4	-476.9	861.2	0.28	0.25	-6.13
6,417.0	0.40	156.50	6,313.8	718.7	-476.0	861.8	1.04	-0.61	82.99
6,580.0	1.00	195.80	6,476.8	716.9	-476.1	860.3	0.45	0.37	24.11

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6,743.0	1.70	193.80	6,639.7	713.1	-477.1	857.8	0.43	0.43	-1.23
6,907.0	2.00	191.20	6,803.7	708.0	-478.2	854.2	0.19	0.18	-1.59
7,070.0	1.90	202.50	6,966.6	702.7	-479.8	850.8	0.24	-0.06	6.93
7,084.5	1.83	201.09	6,981.0	702.2	-480.0	850.6	0.59	-0.49	-9.72
TARGET CIRCLE 1320'FSL, 2550'FEL									
7,233.0	1.20	177.60	7,129.5	698.5	-480.8	847.9	0.59	-0.42	-15.82
7,397.0	1.10	154.10	7,293.5	695.3	-480.0	844.9	0.29	-0.06	-14.33
7,560.0	1.30	129.20	7,456.4	692.8	-477.9	841.6	0.34	0.12	-15.28
7,724.0	1.10	111.80	7,620.4	691.0	-475.0	838.5	0.25	-0.12	-10.61
7,890.0	1.30	103.10	7,786.4	690.0	-471.7	835.8	0.16	0.12	-5.24
7,970.0	1.10	99.80	7,866.3	689.7	-470.0	834.5	0.26	-0.25	-4.13
8,020.0	1.10	99.80	7,916.3	689.5	-469.1	833.9	0.00	0.00	0.00
HARDLINE 88'W OF BHL									

Checked By: _____ Approved By: _____ Date: _____